

PATENT COOPERATION TREATY

PCT

REC'D 10 AUG 2005

WIPO

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PE16448PC00		FOR FURTHER ACTION See Form PCT/IPEA/416																	
International application No. PCT/SE2003/000768		International filing date (day/month/year) 12-05-2003	Priority date (day/month/year)																
International Patent Classification (IPC) or national classification and IPC G01C 21/36																			
Applicant TELEFONAKTIEBOLAGET LM ERICSSON (publ) et al																			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>5</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table border="0"><tr><td><input checked="" type="checkbox"/> Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/> Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/> Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input type="checkbox"/> Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/> Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/> Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/> Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/> Box No. VIII</td><td>Certain observations on the international application</td></tr></table>				<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/> Box No. I	Basis of the report																		
<input type="checkbox"/> Box No. II	Priority																		
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																		
<input type="checkbox"/> Box No. IV	Lack of unity of invention																		
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																		
<input type="checkbox"/> Box No. VI	Certain documents cited																		
<input type="checkbox"/> Box No. VII	Certain defects in the international application																		
<input type="checkbox"/> Box No. VIII	Certain observations on the international application																		
Date of submission of the demand 23-11-2004		Date of completion of this report 01-08-2005																	
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88		Authorized officer Henrik Eriksson / ITW Telephone No. +46 8 782 25 00																	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2003/000768

Box No. I Basis of the report

1. With regard to the language, this report is based on:

☐ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rules 12.3(a) and 23.1(b))

☐ publication of the international application (Rule 12.4(a))

☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

☐ the international application as originally filed/furnished

☒ the description:

pages 1 - 14

pages* _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages _____

pages* _____ as originally filed/furnished

pages* 1 - 5 as amended (together with any statement) under Article 19

pages* _____ received by this Authority on 09-06-2005

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1 - 4

pages* _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2003/000768

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-20</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-20</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-20</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The claimed invention relates to a system and a method for presenting guiding information to a user. Information is presented on the most appropriate medium. An object of the invention is to present guiding information using a presentation medium in such a way as to cause as little distraction as possible from a primary task, e.g. driving a car. Another object is to create guiding information in dependence of an analysis of input information received from a plurality of information sources.

Documents cited in the International Search Report:

D1: US 6208932 B1	D4: US 6356839 B1
D2: US 6381534 B2	D5: EP 0771686 A2
D3: US 6349257 B1	D6: US 6182010 B1

Documents D1-D5, cited as categories X and Y in the Search Report, have been reconsidered to define the general state of the art. Document D6 also represents the general state of the art.

This report is based upon the amended claims as filed with the letter of 09-06-2005.

Document D1 discloses a system and a method for producing guiding information for a user in a vehicle. Information is received from a plurality of information sources (column 10,

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: Box V

lines 44-53; fig.4) and the information can be presented on a display or be outputted from an audio speaker (column 9, lines 25-28). The received information could, for example, be vehicle information and information from teletext broadcasting. The received information is processed and when there is a plurality of information to be provided to the driver, the system selects information having a high priority in accordance with a predetermined priority order (abstract). The system comprises means for determination of the preferred medium for presentation and the information can also be presented in an alternative medium. For example, audio information can be transcoded to text data (column 9, lines 62-67).

Document D2 discloses a navigation information presenting apparatus, where road information is extracted and added to the navigational data (column 38, lines 34-46). For example, the extracted information could be facilities, landmarks, traffic signals and road width.

Further, documents D3 and D4 also disclose navigation systems, where, for example, information about roads and service points are included (see the claims in both documents).

Document D1 is considered to represent the closest prior art. The claimed invention differs from D1 in that a message specification is created in a first stage and that, in a second stage, the actual presentation information is formed in accordance with the specification. Thus, there is a distinction between the specification and the actual presentation information. The message specification is based on compiled information from a plurality of information sources and the message specification is subsequently used for forming the actual presentation information. The invention according to D1 selects information from one of the sources at a time, according to the importance of the information, and there is no evidence in D1 of the creation, based on compiled information from a plurality of information sources, of a message specification.

Documents D1-D6 do not disclose the claimed system and method

.../...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2003/000768

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

for producing guiding information and no relevant combination of the cited documents would lead a person skilled in the art to the invention defined in the claims. The invention according to claims 1-20 is thus novel and is considered to involve an inventive step. It is also considered to be industrially applicable.

CLAIMS

1. A system for producing guiding information for a user in a vehicle having means (310) for compiling information from a plurality of information sources and means for presenting information through a plurality of media (350),
5 characterized by:

- means (321) for processing the compiled information from a plurality of said information sources to generate a specification (S) of a message comprising at least one information object, wherein said specification
10 includes information for retrieval of specified information related to said at least one information object;

- means (341) for determining preferred medium for presentation of information related to said at least one information object in a first format according to said specification (S), and for determining an alternative
15 medium for presentation in a second format; and

- means (340) for forming presentation information according to said specification (S), wherein said means (340) for forming presentation information includes means (342) for retrieving information associated with said at least one information object according to said specification
20 (S) and selected format;

- means (340) for output of said presentation information on a selected one of said preferred medium and said alternative medium.

2. The system of claim 1, **characterized** in that said means (340) for output
25 comprises means (343) for transcoding said message into said second format for presentation on said alternative medium, wherein said second format is different from the original first format specified in the message specification.

3. The system of claim 1, **characterized** in that said means (340) for output comprises means (343) for transcoding said message by deleting information considered irrelevant.

5 4. The system of claim 1, **characterized** in that said means (340) for output comprises means (343) for replacing at least one information object by a stored abstraction of the object from a symbol database (330).

10 5. The system of claim 1, **characterized** in that said information is related to at least one of a vehicle information object (110), a navigation information object (120), a user information object (130) and a target information object (140).

15 6. The system of claim 5, **characterized** in that the navigation information object (120) includes road section objects at least characterized by having at least one of length, service points, road tolls and points of interest.

20 7. The system of claim 5, **characterized** in that the target information object (140) includes a representation of another moving vehicle and said at least one presentation information object includes a representation of an instantaneous route to a meeting place at least fulfilling predetermined characteristics.

25 8. The system according to any of the previous claims, **characterized** by:

- means (341) for determining a system state, and
- means for enforcement of rules applied to the specification of at least one information object and the system state, the rules further being operative to change the system state.

9. The system of claim 8, **characterized** in that:

- the system state includes allocation of available media to information objects,
- said change of system state involving a reallocation of at least one medium.

10. The system of claim 8, **characterized** in that said means for enforcement of rules generates a request for transcoding of said at least one information object.

11. A method for producing guiding information for a user in a vehicle capable of receiving and compiling information from a plurality of information sources and presenting information through a plurality of media, **characterized** by the steps:

- processing the compiled information from a plurality of said information sources to generate a specification (S) of a message comprising at least one information object, wherein said specification includes information for retrieval of specified information related to said at least one information object;
- determining preferred medium for presentation of information related to said at least one information object in a first format according to said specification (S) and an alternative medium for presentation in a second format;
- forming presentation information according to said specification (S), including retrieving information associated with said at least one information object according to said specification (S) and selected format; and

- presenting said presentation information on a selected one of said preferred medium and said alternative medium.

12. The method of claim 11, **characterized** by transcoding said message into
5 said second format for presentation on said alternative medium, wherein said second format is different from the original first format specified in the message specification.

13. The method of claim 11, **characterized by** transcoding said message by
10 deleting presentation information considered irrelevant.

14. The method of claim 11, **characterized by** replacing at least one information object by a stored abstraction of the object from a symbol database (330).

15. The method of claim 11, **characterized** in that said information is related to at least one of a vehicle information object (110), a navigation information object (120), a user information object (130) and a target information object (140).

16. The method of claim 15, **characterized** in that the navigation information
20 object (120) includes road section objects at least characterized by having at least one of length, service points, road tolls, and points of interest.

17. The method of claim 15, **characterized** in that the target information object (140) includes a representation of another moving vehicle and said at least
25 one information object includes a representation of an instantaneous route to a meeting place at least fulfilling predetermined characteristics.

18. The method according to claim 15, **characterized** in that target information in said target information object (140) is changeable in dependence of
30 information in at least one of said vehicle information object (110), said navigation information object (120) and said user information object (130).

19. The method according to any of the claims 11 – 18, further characterized by:

- determining a system state, and
- enforcement of rules applied to the specification of at least one information object and the system state, the rules further being operative to change the system state.

5

20. The method of claim 19, characterized in that:

- the system state includes allocation of available media to information objects,
- said change of system state involves reallocation of medium.

10